

# SERVICE MANUAL



# FISHER

## GRAPHIC EQUALIZER

# EQ-874

EUROPE



139 225 40

## SPECIFICATION

Input Impedance .....	50 k $\Omega$
Output Impedance .....	2 k $\Omega$
T.H.D. (Flat Position)	
at 1 V Output .....	0.02 %
at 5 V Output .....	0.02 %
Gain (Flat Position) .....	+ 0 dB, -1.0 dB
Max. Output Voltage at 1 % T.H.D. ....	5 V
Frequency Response	
20 Hz - 20 kHz .....	+ 0.1 dB, -0.5 dB
Tone Control Response	
Center of Frequency .....	$\pm 10$ %
64 Hz .....	$\pm 12$ dB
160 Hz .....	$\pm 12$ dB
400 Hz .....	$\pm 12$ dB
1 kHz .....	$\pm 12$ dB
2.5 kHz .....	$\pm 12$ dB
6.3 kHz .....	$\pm 12$ dB
15.6 kHz .....	$\pm 12$ dB

S/N (IHF A, Reference 1 V, Flat Position) .....	100 dB
Crosstalk	
100 Hz .....	80 dB
1 kHz .....	80 dB
15 kHz .....	60 dB

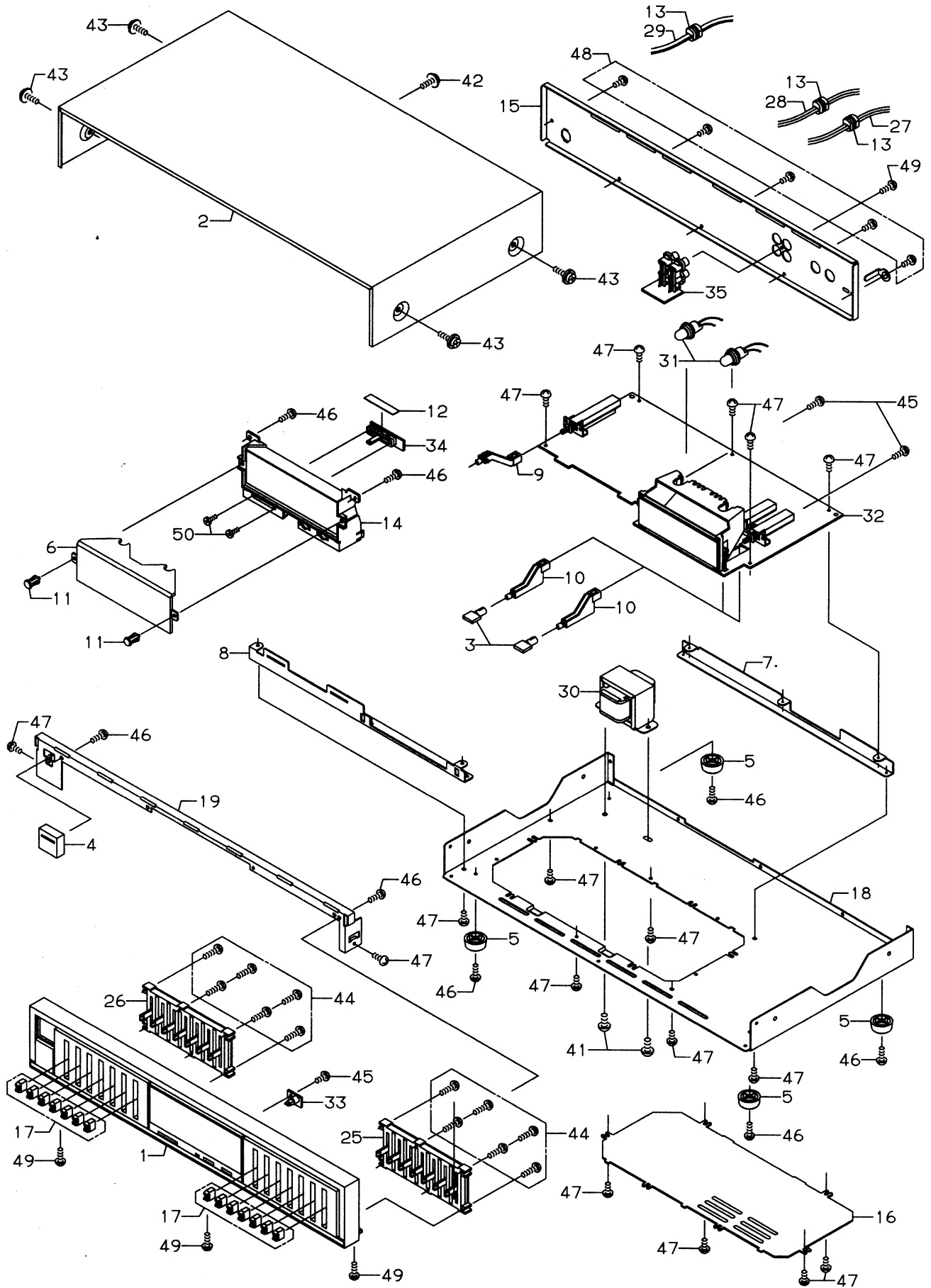
### GENERAL

Power Requirements (50Hz) .....	220 V AC
Power Consumption .....	10 W
Dimensions (WxHxD) .....	440 x 80 x 267 mm
Weight (approx) .....	3.2 kg

— Specifications and design are subject to change without notice. —

REFERENCE No. WM-19535

# CABINET & CHASSIS EXPLODED VIEW



# CABINET & CHASSIS PARTLIST

Ref. No.	Parts No.	Description	Q'ty
<b>PACKAGE</b>			
	131-2-3901-10300	Staple SS19mm	14
	131-6-1169-14034	Box Corrugate-Exp	1
	131-6-3009-35090	Pad	2
	131-6-3069-16350	Patching Sheet	1
	141-6-2519-22290	Sheet Polyethylene	1
	141-6-4559-03300	Serial No. Sheet	2
<b>ACCESSORY</b>			
	131-6-2719-10401	Bag Fan	1
	142-6-4119-33426	Explanatory Booklet	1
<b>CABINET</b>			
	4-2352-02944	Connector 1P Assy	1
	4-2359-78834	Connector 1P Assy	1
	4-2379-21520	Terminal Lug	1
	141-6-4559-03300	Serial No. Sheet	1
1	131-0-1016-46101	Cabinet Front Assy	1
2	131-2-1410-31500	Cover	1
3	131-2-1601-70103	Knob	2
4	131-2-1601-85209	Knob Push	1
5	131-2-1801-14100	Leg	4
6	131-2-3608-17400	Filter (Clear)	1
7	131-2-3614-29400	Mount P.C.B.	1
8	131-2-3614-29500	Mount P.C.B. (F)	1
9	131-2-4219-18800	Shaft	1
10	131-2-4219-19900	Shaft	2
11	131-2-4221-00600	Rivet	2
12	131-2-6108-12800	Plate Sever	1
13	131-2-6111-14200	Bushing (4N-4)	3
14	141-0-1149-17700	Mount Screen Assy	1
15	141-2-1219-37022	Panel Rear	1
16	141-2-1259-11300	Cover Bottom	1
17	141-2-1659-46200	Knob Slide	14
18	141-2-3119-31900	Chassis	1
19	141-2-3519-74203	Mount Cabi Front	1
25	4-2229-77140	Slide VR Unit	1
26	4-2229-77141	Slide VR Unit	1
27	4-2369-74592	Plug Cord RCA	1

Ref. No.	Parts No.	Description	Q'ty
28	4-2369-74593	Plug Cord RCA	1
29	△ 4-2432-00071	Power Cord	1
30	△ 4-2512-35120	Power Trans Tabuchi	1
31	4-6129-70723	Lamp 16V 150mA	2
32	141-0-1939-21300	Main P.C.B. Assy	1
33	141-0-1939-21310	LED P.C.B. Assy	1
34	141-0-1939-21320	Volume P.C.B. Assy	1
35	141-0-1939-21330	Pinjack P.C.B. Assy	1
41	131-2-4201-27801	Screw C-Tite 4X8 Z1	2
42	141-2-4219-33101	+ BTS-B 3.0X8 Sems BL	1
43	141-2-4219-38400	+ BTS-B 4 x 8 Sems BLK	4
44	411 020 5409	SCR S-TPG BRZ 2.6X14	12
45	411 020 5706	SCR S-TPG BRZ 2.6X8	3
46	411 020 5904	SCR S-TPG BRZ 3X10	8
47	411 020 7700	SCR S-TPG BRZ 3X6	17
48	411 099 9704	SCR S-TPG BRZ 3X6	5
49	411 099 9803	SCR S-TPG BRZ 3X8	4
50	411 030 5901	SCR BIN 2X4	2

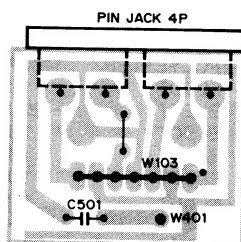
## NOTES:

- Parts order must contain Model Number, Part Number and Description.
- Ordering quantity of screws and resistors must be multiple of 10 pcs.

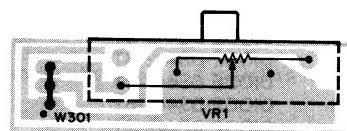
## PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\Delta$  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with  $\Delta$ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

## PINJACK P.C.BOARD (BOTTOM VIEW)



## VOLUME P.C.BOARD (BOTTOM VIEW)



## LED P.C.BOARD (BOTTOM VIEW)



# P.C.BOARD PART LIST

Ref. No.	Parts No.	Description	Q'ty	Ref. No.	Parts No.	Description	Q'ty
<b>MAIN P.C.B. ASSY</b>				C204	403 049 1609	ELECT 1U M 50V	1
32	141-0-1939-21300	Main P.C.B. Assy	1	C205	403 009 8105	CERAMIC 100P K 50V	1
	4-2359-79150	Socket Jumper 11P	2	C206	403 009 8105	CERAMIC 100P K 50V	1
	4-2369-73130	Plug 3P	2	C207	403 009 8105	CERAMIC 100P K 50V	1
	4-2372-00830	EC Terminal 1P	2	C208	403 009 8105	CERAMIC 100P K 50V	1
	4-9549-70120	LCD, FTD6497	1	C209	403 049 5409	ELECT 10U M 50V	1
	111-2-6220-11100	Wire Wrap Terminal	11	C210	403 049 5409	ELECT 10U M 50V	1
	131-2-6306-12300	Reflector	1	C211	403 067 8208	MT-COMPO 0.068U J 50V	1
	131-2-6308-26100	Filter	1	C212	403 067 8208	MT-COMPO 0.068U J 50V	1
	131-2-9800-01004	Jumper	1	C213	403 096 8606	ELECT 1.5U K 50V	1
	411 002 8503	SCR PAN 3X6	1	C214	403 096 8606	ELECT 1.5U K 50V	1
SW01	4-2312-06160	Push SW 1 KEY (POWER SW.)	1	C215	403 060 2005	POLYESTER 0.027U J 50V	1
SW02	4-2312-06170	Push SW 2 KEY (TAPE MONITOR/EQ)	1	C216	403 060 2005	POLYESTER 0.027U J 50V	1
W101	4-2359-78831	Connector 1P Assy	1	C217	403 067 8307	MT-COMPO 0.68U J 50V	1
IC01	409 036 8101	IC M5229P	1	C218	403 067 8307	MT-COMPO 0.68U J 50V	1
IC02	409 036 8101	IC M5229P	1	C219	403 057 0106	POLYESTER 0.01U J 50V	1
IC03	409 073 8706	IC LA6458D	1	C220	403 057 0106	POLYESTER 0.01U J 50V	1
IC04	409 073 8706	IC LA6458D	1	C221	403 067 7003	MT-COMPO 0.27U J 50V	1
IC05	409 073 8706	IC LA6458D	1	C222	403 067 7003	MT-COMPO 0.27U J 50V	1
IC06	409 073 8706	IC LA6458D	1	C223	403 061 1908	POLYESTER 3900P J 50V	1
IC07	409 074 1102	IC LC7561	1	C224	403 061 1908	POLYESTER 3900P J 50V	1
Q101	405 013 6801	TR 2SC2274-E	1	C225	403 067 5603	MT-COMPO 0.1U J 50V	1
or	405 013 7006	TR 2SC2274-F	1	C226	403 067 5603	MT-COMPO 0.1U J 50V	1
Q102	405 006 6504	TR 2SA984-E	1	C227	403 058 7906	POLYESTER 1800P J 50V	1
or	405 006 6702	TR 2SA984-F	1	C228	403 058 7906	POLYESTER 1800P J 50V	1
Q103	405 004 4502	TR 2SA608-F-NP	1	C229	403 061 3704	POLYESTER 0.039U J 50V	1
or	405 004 5004	TR 2SA608-G-NP	1	C230	403 061 3704	POLYESTER 0.039U J 50V	1
Q201	405 019 2708	TR 2SC536-F-NP	1	C231	403 031 2805	CERAMIC 680P K 50V	1
or	405 019 3804	TR 2SC536-G-NP	1	C232	403 031 2805	CERAMIC 680P K 50V	1
Q202	405 019 2708	TR 2SC536-F-NP	1	C233	403 058 9603	POLYESTER 0.018U J 50V	1
or	405 019 3804	TR 2SC536-G-NP	1	C234	403 058 9603	POLYESTER 0.018U J 50V	1
Q203	405 016 2206	TR 2SC2878-A	1	C235	403 020 4902	CERAMIC 270P J 50V	1
or	405 016 2305	TR 2SC2878-B	1	C236	403 020 4902	CERAMIC 270P J 50V	1
Q204	405 016 2206	TR 2SC2878-A	1	C237	403 062 9705	POLYESTER 6800P J 50V	1
or	405 016 2305	TR 2SC2878-B	1	C238	403 062 9705	POLYESTER 6800P J 50V	1
Q301	405 016 2206	TR 2SC2878-A	1	C301	403 067 7706	MT-COMPO 0.047U J 50V	1
or	405 016 2305	TR 2SC2878-B	1	C302	403 067 7706	MT-COMPO 0.047U J 50V	1
Q302	405 027 0505	TR 2SK246-GR	1	C303	403 057 0106	POLYESTER 0.01U J 50V	1
or	405 034 5104	TR 2SK246-BL	1	C304	403 057 0106	POLYESTER 0.01U J 50V	1
Q303	405 027 0505	TR 2SK246-GR	1	C305	403 061 1908	POLYESTER 3900P J 50V	1
or	405 034 5104	TR 2SK246-BL	1	C306	403 061 1908	POLYESTER 3900P J 50V	1
D101	407 004 9105	DIODE DSF10C-BT	1	C307	403 058 0808	POLYESTER 1500P J 50V	1
D102	407 004 9105	DIODE DSF10C-BT	1	C308	403 058 0808	POLYESTER 1500P J 50V	1
D103	407 004 9105	DIODE DSF10C-BT	1	C309	403 057 6306	POLYESTER 1200P K 50V	1
D104	407 004 9105	DIODE DSF10C-BT	1	C310	403 057 6306	POLYESTER 1200P K 50V	1
D105	407 049 9504	ZENER DIODE GZA20Y	1	C311	403 057 6306	POLYESTER 1200P K 50V	1
D106	407 049 9504	ZENER DIODE GZA20Y	1	C312	403 057 6306	POLYESTER 1200P K 50V	1
D107	407 004 9105	DIODE DSF10C-BT	1	C313	403 056 8608	POLYESTER 1000P K 50V	1
D108	407 004 9105	DIODE DSF10C-BT	1	C314	403 056 8608	POLYESTER 1000P K 50V	1
D301	407 005 3805	DIODE DS442-BT	1	C315	403 049 1609	ELECT 1U M 50V	1
D302	407 005 3805	DIODE DS442-BT	1	C316	403 040 2704	ELECT 22U M 10V	1
D303	407 005 3805	DIODE DS442-BT	1	C317	403 049 1609	ELECT 1U M 50V	1
D304	407 005 3805	DIODE DS442-BT	1	C318	403 049 1609	ELECT 1U M 50V	1
D305	407 005 3805	DIODE DS442-BT	1	C319	403 049 1609	ELECT 1U M 50V	1
D306	407 005 3805	DIODE DS442-BT	1	C320	403 049 1609	ELECT 1U M 50V	1
D307	407 005 3805	DIODE DS442-BT	1	C321	403 049 1609	ELECT 1U M 50V	1
D308	407 005 3805	DIODE DS442-BT	1	C322	403 049 1609	ELECT 1U M 50V	1
D309	407 050 4802	ZENER DIODE GZA5.1Y	1	C323	403 049 1609	ELECT 1U M 50V	1
D311	407 005 3805	DIODE DS442-BT	1	C324	403 049 1609	ELECT 1U M 50V	1
C101	403 074 2701	CERAMIC 0.047U Z 50V	1	C325	403 060 6607	POLYESTER 3300P K 50V	1
C102	403 074 2701	CERAMIC 0.047U Z 50V	1	C326	403 038 2402	ELECT 100U M 6.3V	1
C103	404 012 7000	CERAMIC 0.01U P 500V	1	C328	403 047 4206	ELECT 47U M 25V	1
C104	404 012 7000	CERAMIC 0.01U P 500V	1	C329	403 050 1209	ELECT 2.2U M 50V	1
C105	404 012 7000	CERAMIC 0.01U P 500V	1	C330	403 050 1209	ELECT 2.2U M 50V	1
C106	404 012 7000	CERAMIC 0.01U P 500V	1	C401	403 074 2701	CERAMIC 0.047U Z 50V	1
C107	403 054 2509	ELECT 470U M 35V	1	R101	401 060 6504	OXIDE-MT 27 JB 1W	1
C108	403 054 2509	ELECT 470U M 35V	1	R102	401 060 6504	OXIDE-MT 27 JB 1W	1
C109	403 047 4206	ELECT 47U M 25V	1	R103	401 022 1905	CARBON 680 JA 1/4W	1
C110	403 047 4206	ELECT 47U M 25V	1	R104	401 022 1905	CARBON 680 JA 1/4W	1
C111	403 047 4206	ELECT 47U M 25V	1	R105	402 015 7706	FUSIBLE RE 100 J- 1/4W	1
C112	403 047 4206	ELECT 47U M 25V	1	R106	402 015 7706	FUSIBLE RE 100 J- 1/4W	1
C113	403 047 4206	ELECT 47U M 25V	1	R107	401 018 2800	CARBON 330 JA 1/4W	1
C114	403 047 4206	ELECT 47U M 25V	1	R108	401 020 0801	CARBON 470 JA 1/4W	1
C115	403 045 0606	ELECT 100U M 25V	1	R109	401 027 5502	CARBON 6.8K JA 1/6W	1
C116	403 047 4206	ELECT 47U M 25V	1	R110	401 024 7400	CARBON 10K JA 1/6W	1
C117	403 051 2007	ELECT 4.7U M 50V	1	R111	401 012 5708	CARBON 1K JA 1/4W	1
C201	403 009 8105	CERAMIC 100P K 50V	1	R201	401 024 7004	CARBON 1K JA 1/6W	1
C202	403 009 8105	CERAMIC 100P K 50V	1	R202	401 012 5708	CARBON 1K JA 1/4W	1
C203	403 049 1609	ELECT 1U M 50V	1	R203	401 027 0507	CARBON 470K JA 1/6W	1

## P.C.BOARD PART LIST

Ref. No.	Parts No.	Description	Q'ty
R204	401 027 0507	CARBON 470K JA 1/6W	1
R207	401 027 2600	CARBON 5.6K JA 1/6W	1
R208	401 027 2600	CARBON 5.6K JA 1/6W	1
R209	401 027 2600	CARBON 5.6K JA 1/6W	1
R210	401 027 2600	CARBON 5.6K JA 1/6W	1
R211	401 026 6609	CARBON 390 JA 1/6W	1
R212	401 026 6609	CARBON 390 JA 1/6W	1
R213	401 024 7400	CARBON 10K JA 1/6W	1
R214	401 024 7400	CARBON 10K JA 1/6W	1
R215	401 024 7004	CARBON 1K JA 1/6W	1
R216	401 024 7004	CARBON 1K JA 1/6W	1
R217	401 024 7707	CARBON 100K JA 1/6W	1
R218	401 024 7707	CARBON 100K JA 1/6W	1
R219	401 026 4605	CARBON 33K JA 1/6W	1
R220	401 018 4903	CARBON 33K JA 1/4W	1
R221	401 027 5205	CARBON 680 JA 1/6W	1
R222	401 027 5205	CARBON 680 JA 1/6W	1
R223	401 027 5205	CARBON 680 JA 1/6W	1
R224	401 027 5205	CARBON 680 JA 1/6W	1
R225	401 027 5205	CARBON 680 JA 1/6W	1
R226	401 027 5205	CARBON 680 JA 1/6W	1
R227	401 027 5205	CARBON 680 JA 1/6W	1
R228	401 027 5205	CARBON 680 JA 1/6W	1
R229	401 027 5205	CARBON 680 JA 1/6W	1
R230	401 027 5205	CARBON 680 JA 1/6W	1
R231	401 027 5205	CARBON 680 JA 1/6W	1
R232	401 027 5205	CARBON 680 JA 1/6W	1
R233	401 027 5205	CARBON 680 JA 1/6W	1
R234	401 027 5205	CARBON 680 JA 1/6W	1
R301	401 027 3201	CARBON 560K JA 1/6W	1
R302	401 024 7707	CARBON 100K JA 1/6W	1
R303	401 027 2600	CARBON 5.6K JA 1/6W	1
R304	401 024 8001	CARBON 1M JA 1/6W	1
R305	401 025 2305	CARBON 150K JA 1/6W	1
R306	401 024 7400	CARBON 10K JA 1/6W	1
R307	401 024 8001	CARBON 1M JA 1/6W	1
R308	401 025 2305	CARBON 150K JA 1/6W	1
R309	401 024 7400	CARBON 10K JA 1/6W	1
R310	401 024 8001	CARBON 1M JA 1/6W	1
R311	401 025 2305	CARBON 150K JA 1/6W	1
R312	401 024 7400	CARBON 10K JA 1/6W	1
R313	401 027 3201	CARBON 560K JA 1/6W	1
R314	401 024 7707	CARBON 100K JA 1/6W	1
R315	401 027 2600	CARBON 5.6K JA 1/6W	1
R316	401 025 8703	CARBON 220K JA 1/6W	1
R317	401 026 4605	CARBON 33K JA 1/6W	1
R318	401 025 7805	CARBON 2.2K JA 1/6W	1
R319	401 024 7707	CARBON 100K JA 1/6W	1
R320	401 025 1902	CARBON 15K JA 1/6W	1
R321	401 024 7004	CARBON 1K JA 1/6W	1
R322	401 024 7707	CARBON 100K JA 1/6W	1
R323	401 026 6609	CARBON 390 JA 1/6W	1

Ref. No.	Parts No.	Description	Q'ty
R324	401 026 1307	CARBON 27K JA 1/6W	1
R325	401 026 4902	CARBON 330K JA 1/6W	1
R326	401 026 4902	CARBON 330K JA 1/6W	1
R327	401 026 4902	CARBON 330K JA 1/6W	1
R328	401 026 4902	CARBON 330K JA 1/6W	1
R329	401 026 4902	CARBON 330K JA 1/6W	1
R330	401 026 4902	CARBON 330K JA 1/6W	1
R331	401 026 4902	CARBON 330K JA 1/6W	1
R332	401 026 4902	CARBON 330K JA 1/6W	1
R333	401 023 3700	CARBON 82K JA 1/4W	1
R334	401 018 3807	CARBON 3.3K JA 1/4W	1
R336	401 012 4503	CARBON 100 JA 1/4W	1
R337	401 026 4605	CARBON 33K JA 1/6W	1
R338	401 012 8105	CARBON 100K JA 1/4W	1
R339	401 026 9907	CARBON 4.7K JA 1/6W	1
R340	401 026 9907	CARBON 4.7K JA 1/6W	1
R341	401 026 4308	CARBON 3.3K JA 1/6W	1
R342	401 026 4308	CARBON 3.3K JA 1/6W	1
R343	401 024 7004	CARBON 1K JA 1/6W	1
R344	401 024 7004	CARBON 1K JA 1/6W	1
R345	401 025 8703	CARBON 220K JA 1/6W	1
R346	401 025 8703	CARBON 220K JA 1/6W	1
R347	401 024 7707	CARBON 100K JA 1/6W	1
R348	401 024 7707	CARBON 100K JA 1/6W	1
R349	401 026 4902	CARBON 330K JA 1/6W	1
R350	401 026 4902	CARBON 330K JA 1/6W	1
R401	401 022 3107	CARBON 6.8K JA 1/4W	1
R402	401 022 3107	CARBON 6.8K JA 1/4W	1
R403	401 021 3009	CARBON 5.6K JA 1/4W	1
R404	401 021 3009	CARBON 5.6K JA 1/4W	1

### LED P.C.B. ASSY

33	141-0-1939-21310	LED P.C.B. Assy	1
	131-2-4208-33600	Spacer	1
	131-2-9800-01055	Jumper	1
D401	407 027 4606	LED SLP-151B	1

### VOLUME P.C.B. ASSY

34	141-0-1939-21320	Volume P.C.B. Assy	1
VR1	4-2229-75970	Slide VR 10KAX1	1
	131-0-4006-31418	Cord Assy	1

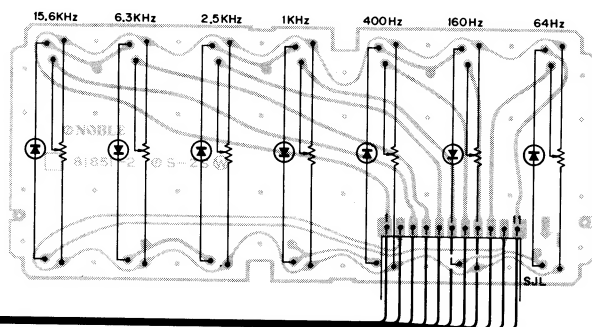
### PINJACK P.C.B. ASSY

35	141-0-1939-21330	Pinjack P.C.B. Assy	1
	4-2352-01700	Pin Jack 4P	1
C501	403 074 2701	CERAMIC 0.047U Z 50V	1

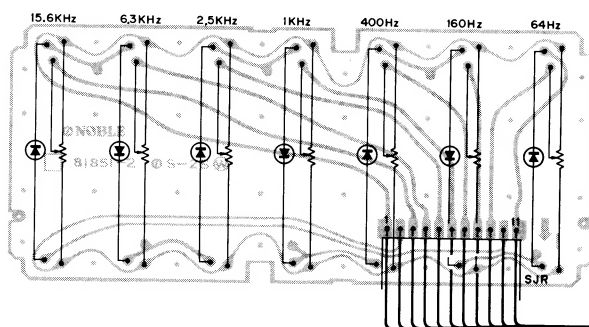
### NOTES:

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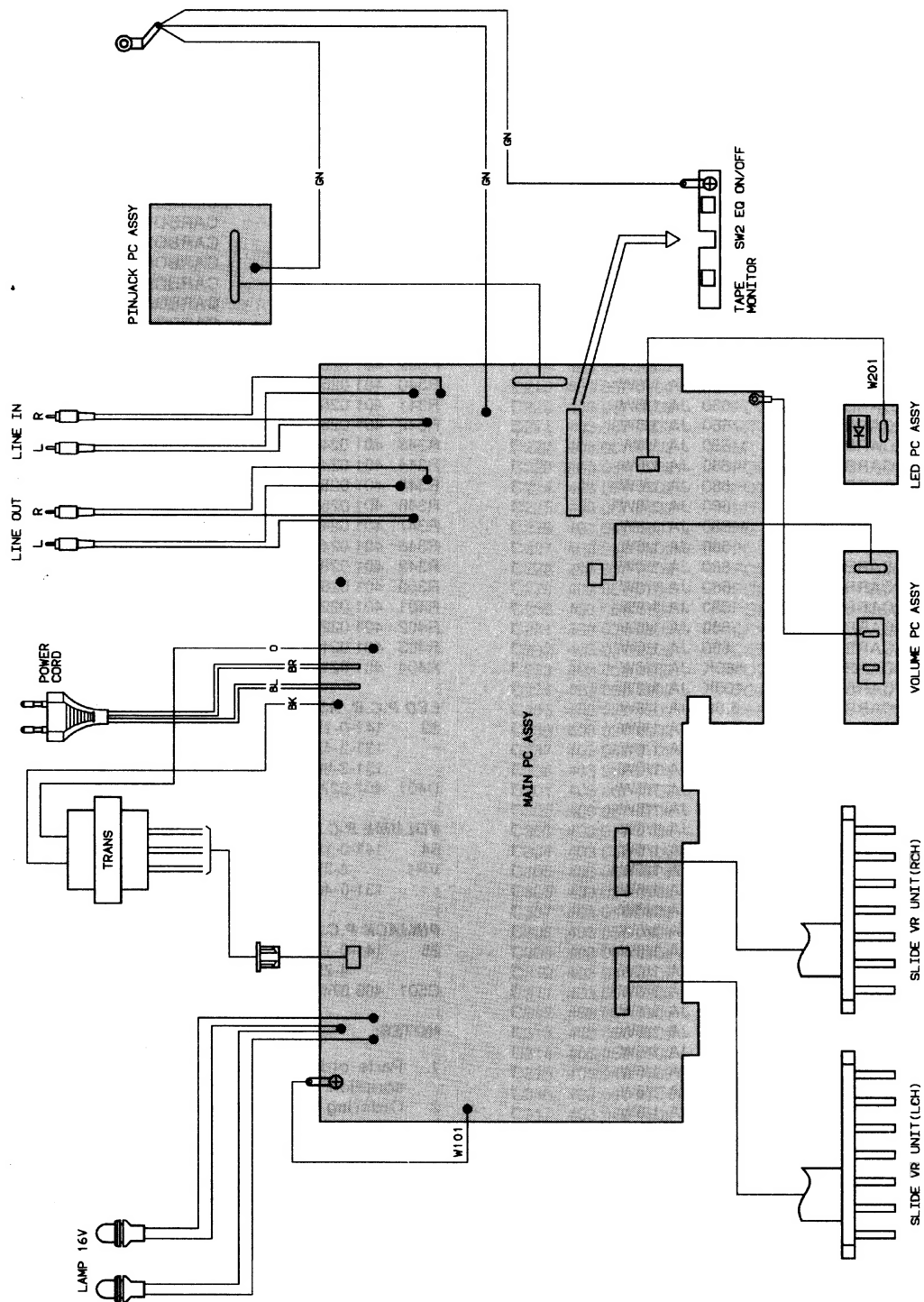
## SLIDE VOLUME UNIT (LEFT)



## SLIDE VOLUME UNIT (RIGHT)



## POINT TO POINT WIRING DIAGRAM



**SWITCH POSITION TABLE**

No.	Name	Position
SW1	POWER Switch	OFF
SW2	TAPE MONITOR Switch	SOURCE
	EQUALIZER Switch	OFF

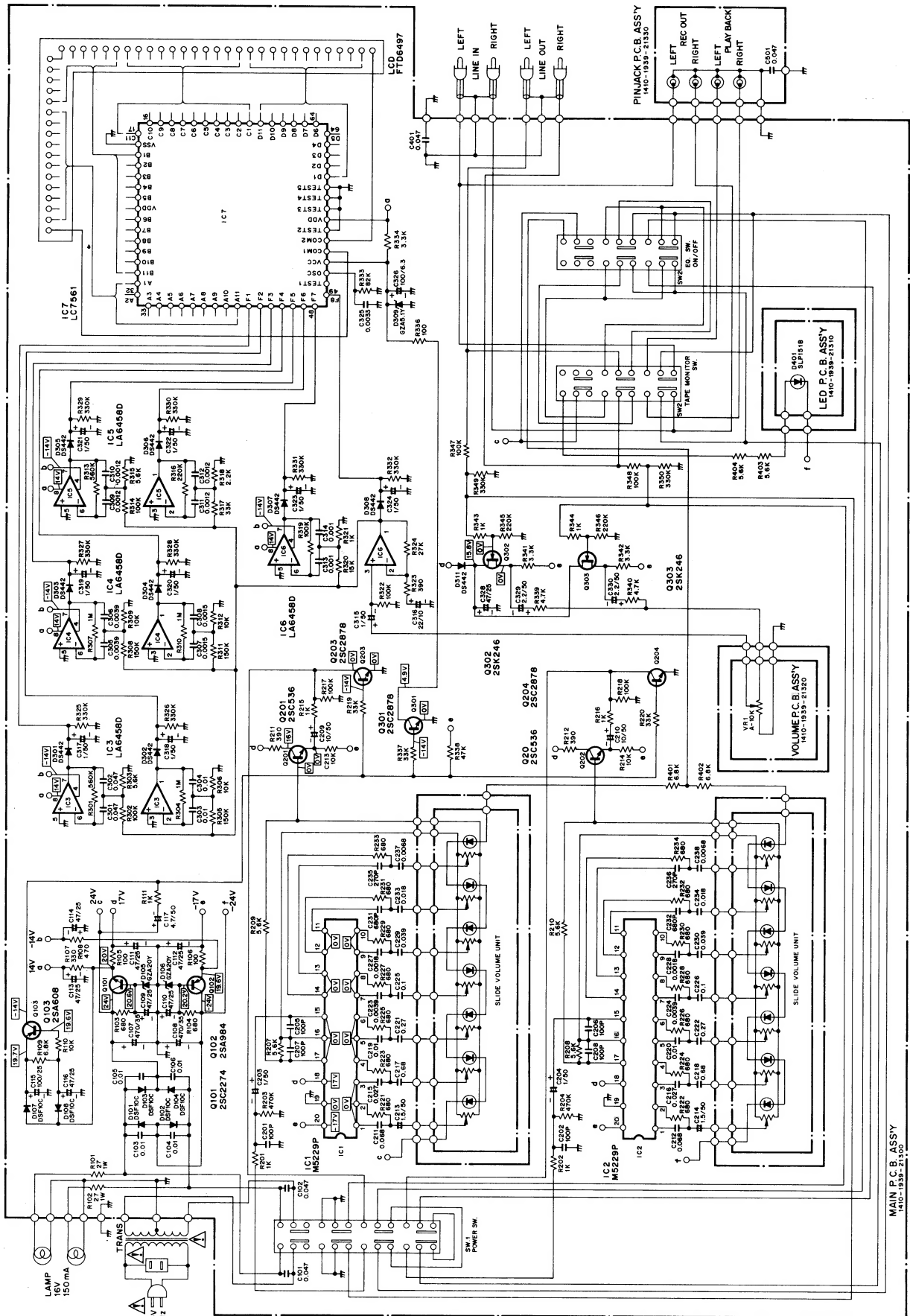
**NOTES:**

1. All resistors values are indicated in "ohm" ( K =  $10^3$ , M =  $10^6$  ).
2. All capacitors values are indicated in " $\mu$ F" ( P =  $10^{-12}$  ).
3. All voltages indicated on the schematics are measured under the following conditions.
  - a. Use a V.T.V.M.

- b. All voltages  $\pm 10\%$  with respect to chassis ground.
- c. No signals at input terminals.
- d. AC input at 220 volts 50Hz
4. This is a basic schematic diagram.

Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

# SCHEMATIC DIAGRAM



# MAIN PRINTED CIRCUIT BOARD (BOTTOM VIEW)

